REMARKS

The Office Action dated July 20, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-25 and 56-57 are currently pending in the application, of which claims 1-2, 10-11, 17, 20-21, 24-25, and 56-57 are independent claims. Claim 19 has been amended to depend from claim 24 rather than from claim 17 and claim 56 has been amended to correct a typographic error. No new matter has been added. Claims 1-25 and 56-57 are respectfully submitted for consideration.

Claims 1-25 and 56-57 were rejected under 35 U.S.C. 102(b) as being anticipated by IEEE Std 802.16-2001, which was apparently approved December 6, 2001, and bears a copyright notice from 2002 ("IEEE"). Applicants respectfully traverse this rejection.

Based on the copyright notice, IEEE has not been shown to qualify as prior art under section (b) of 35 U.S.C. 102. Section (b), the section relied upon in the rejection, requires that the document be published more than one year before the filing date of the application under rejection.

The present application, however, was filed July 31, 2003, and claims priority to March 14, 2003. The copyright notice indication of "2002" does not establish that IEEE was published before March 14, 2002. Consequently, it is respectfully submitted that a *prima facie* rejection under 35 U.S.C. 102(b) has not been made.

Nevertheless, for the Examiner's convenience, and to expedite prosecution in the event that the Examiner should deem IEEE available as prior art under some other section of the 35 U.S.C. 102 (or that the Examiner should be able to provide evidence of an earlier publication or public knowledge date for IEEE), the follow comments are submitted.

Claim 1, upon which claims 6-9 depend, is directed to a data transmission method including first transmitting from a subscriber station at least one capacity request message. The method also includes granting a capacity subscriber station-specifically by a base station. The method further includes second transmitting at least one capacity grant message from the base station. The method additionally includes connection-specifically allocating the granted capacity by the subscriber station. The method also includes third transmitting from the subscriber station at least one message wherein the at least one message comprises information based on previous capacity requests. The method further includes fourth transmitting data from the subscriber station according to a capacity allocation. The method additionally includes monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions.

Claim 2, upon which claims 3-5 depend, is directed to a data transmission method including first determining communication groups. The method also includes second determining a group priority order. The method further includes first transmitting at least one capacity request message from a subscriber station. The method additionally

includes granting a capacity subscriber station-specifically by a base station. The method also includes second transmitting at least one capacity grant message from the base station. The method further includes scheduling connections by the subscriber station based on the communication groups, the group priority order and the granted capacity. The method additionally includes third transmitting from the subscriber station at least one message, wherein the at least one message comprises information based on previous capacity requests. The method also includes fourth transmitting data from the subscriber station, wherein the data is related to a connection scheduling. The method further includes monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions.

Claim 10, upon which claims 14-16 depend, is directed to a communication system including first transmitting means for transmitting capacity request messages. The system also includes granting means for granting a capacity subscriber station-specifically. The system further includes second transmitting means for transmitting capacity grant messages. The system additionally includes allocating means for connection-specifically allocating the granted capacity. The system also includes third transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests. The system further includes fourth transmitting means for transmitting data according to the capacity allocation made by a subscriber station. The system additionally includes monitoring means for monitoring at least one of the request messages, capacity grant messages and received transmissions.

Claim 11, upon which claims 12-13 depend, is directed to a communication system including grouping means for grouping connections into predetermined communication groups. The system also includes first transmitting means for transmitting capacity request messages. The system further includes granting means for granting a capacity subscriber station-specifically. The system additionally includes second transmitting means for transmitting capacity grant messages. The system also includes scheduling means for scheduling connections based on the communication groups, a predetermined group priority order and the granted capacity. The system further includes third transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests. The system additionally includes fourth transmitting means for transmitting data according to a connection scheduling. The system also includes monitoring means for monitoring at least one of the request messages, the capacity grant messages and received transmissions.

Claim 17 is directed to a base station including granting means for granting a transmission capacity subscriber station-specifically. The base station also includes transmitting means for transmitting capacity grant messages to at least one subscriber station. The base station further includes monitoring means for monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Claim 20 is directed to a subscriber station including first transmitting means for transmitting capacity request messages of at least one connection. The subscriber station also includes receiving means for receiving capacity grant messages from a base station. The subscriber station further includes allocating means for connection-specifically allocating a capacity granted by the base station. The subscriber station additionally includes second transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station. The subscriber station also includes third transmitting means for transmitting data according to a capacity allocation made by the subscriber station.

Claim 21, upon which claims 22-23 depend, is directed to a subscriber station including a first transmitting unit configured to transmit capacity request messages of at least one connection. The subscriber station also includes a grouping unit configured to group connections into predetermined communication groups. The subscriber station further includes a scheduling unit configured to schedule the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station. The subscriber station additionally includes a second transmitting unit configured transmit messages wherein the messages comprise information based on previous capacity requests. The subscriber station also includes a third transmitting unit configured to transmit data according to a connection scheduling.

Claim 24, upon which claims 18-19 depend, is directed to a base station configured to receive capacity request messages from at least one subscriber station. The

base station is also configured to grant a transmission capacity subscriber station-specifically. The base station is further configured to transmit capacity grant messages to the at least one subscriber station. The base station is additionally configured to monitor request messages received from the at least one subscriber stations, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber station.

Claim 25 is directed to a subscriber station configured to transmit capacity request messages of at least one connection. The subscriber station is also configured to allocate connection-specifically a capacity granted by a base station. The subscriber station is further configured to transmit messages wherein the messages comprise information on previous capacity requests. The subscriber station is additionally configured to transmit data from a subscriber station according to a capacity allocation made by the subscriber station.

Claim 56 is directed to a method including transmitting capacity request messages of at least one connection. The method also includes receiving capacity grant messages from a base station. The method further includes connection-specifically allocating a capacity granted by the base station. The method additionally includes transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station. The method also includes transmitting data according to a capacity allocation made by the subscriber station.

Claim 57 is directed to a method including transmitting capacity request messages of at least one connection. The method also includes grouping connections into predetermined communication groups. The method further includes scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station. The method additionally includes transmitting messages wherein the messages comprise information based on previous capacity requests. The method also includes transmitting data according to a connection scheduling.

Applicants respectfully submit that IEEE fails to disclose or suggest all of the elements of any of the presently pending claims.

IEEE is Part 16: "Air Interface for Fixed Broadband Wireless Access Systems," of the IEEE standard for local and metropolitan area networks. IEEE specifies the air interface of fixed (stationary) point-to-multipoint broadband wireless access systems providing multiple services. Although the Media Access Control (MAC) layer is allegedly capable of supporting multiple physical layer specifications optimized for the frequency bands of application, the standard includes a particular physical layer specification for systems operating between 10 GHz and 66 GHz.

Claim 1, for example, recites, in part: "transmitting from the subscriber station at least one message wherein the at least one message comprises information based on previous capacity requests." IEEE fails to disclose or suggest at least this feature of claim 1.

The Office Action took the position that these features are disclosed by IEEE, citing page 86, section 6.2.6.1, and page 88, section 6.2.6.4. Applicants respectfully disagree.

In IEEE, requests for bandwidth are made in terms of the number of bytes needed to carry the Media Access Control (MAC) header and payload. The bandwidth requests (BRs) can be incremental or aggregate. When a base station receives an incremental BR, IEEE requires the base station to add the quantity of the bandwidth requested to its current perception of the bandwidth needs of the connection. Likewise, in IEEE, when the base station receives an aggregate BR, IEEE requires the base station to replace its perception of the bandwidth needs of the connection with the quantity of bandwidth requested.

The type field in the header described by IEEE at page 86, section 6.2.6.1, indicates whether the request in incremental or aggregate. IEEE lists only two types of BRs: one for new requests, and another for updating already existing requests. BRs for new requests are irrelevant to this discussion. With respect to updating already existing requests, however, IEEE does not disclose or suggest that a BR would include information based on previous capacity requests.

IEEE also discusses polling at page 88, section 6.2.6.4. Polling, as described in IEEE, is a process by which the base station allocates to the subscriber stations bandwidth specifically for the purpose of making BRs. The allocations may be to individual subscriber stations or to groups of subscriber stations. Allocations to groups of

connections and/or subscriber stations actually define bandwidth contention Information Elements (IEs). The allocations are not in the form of an explicit message, but are contained as a series of information elements within the uplink map.

More specifically, in IEEE, as described at page 88, section 6.2.6.4.1, when a subscriber station is polled individually, no explicit message is transmitted to poll the subscriber station. Instead, the subscriber station is allocated (in the uplink map) bandwidth sufficient to respond with a BR.

In short, although incremental BRs received by BSs are used in combination with previously bandwidth requirements information, the incremental BRs themselves are not "based on previous capacity requests," but on new requirements for additional bandwidth. Thus, it should be clear that IEEE fails to disclose or suggest in any way: "transmitting from the subscriber station at least one message" and especially "wherein the at least one message comprises information based on previous capacity requests," as recited, for example, in claim 1. It is, therefore, respectfully requested that the rejection of claim 1 be withdrawn.

Independent claims 2, 10-11, 17, 20-21, 24-25, and 56-57 each have their own scope. Nevertheless, each of claims 2, 10-11, 17, 20-21, 24-25, and 56-57 recites at least some features similar to those features discussed above with respect to claim 1. Accordingly, it is respectfully submitted that each of claims 2, 10-11, 17, 20-21, 24-25, and 56-57 recites subject matter that is neither disclosed nor suggested in IEEE, and it is

respectfully requested that the rejections of claims 2, 10-11, 17, 20-21, 24-25, and 56-57 be withdrawn.
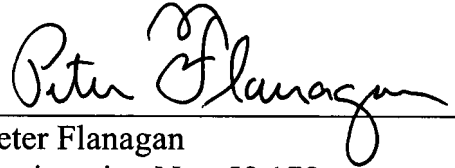
Claims 3-9, 12-16, 18-19, and 22-23 depend respectively from, and further limit, claims 1-2, 10-11, 21, and 24. Claims 3-9, 12-16, 18-19, and 22-23, therefore, each recite subject matter that is neither disclosed nor suggested in IEEE, and it is respectfully requested that the rejections of claims 3-9, 12-16, 18-19, and 22-23 be withdrawn.

For the reasons set forth above, it is respectfully submitted that each of claims 1-25 and 56-57 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-25 and 56-57 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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